



50-inch class Full 1080p HD Plasma Display

TH-50BT300U

Product specification (design and specification subject to change without notice)

DISPLAY

Screen Size (Diagonal)	49.9-inch (1,268 mm)
Aspect ratio	16:9
Effective Display Area (W x H)	43.5" x 24.5" (1,105 x 622 mm)
Number of pixels (H x V)	1,920 x 1,080 pixels (1 pixel=3cells for R, G and B)
Pixel Pitch (H x V)	0.576 x 0.576 mm
Contrast Ratio	5,000,000 :1
Gradation	12,288 steps (equivalent)
Panel Life*1	approx. 100,000 hours
Full HD 3D	Full HD 3D Ready*2

*1: Guideline operating hours before the panel brightness is reduced to half when the panel is used to display motion pictures in the Standard mode. Afterimages (burned-in images) and malfunctions are not taken into consideration.

*2: An optional 3D IR Transmitter and 3D Eyewear are required for viewing 3D images.

CONNECTION TERMINAL

VIDEO IN	BNC x 1	1.0 Vp-p (75 Ω)
AUDIO IN (L/R)	RCA pin jack x 1 set	0.5 Vrms
COMPONENT/RGB IN	BNC x 3	Y/G : with sync 1.0 Vp-p (75 Ω) Pb/Cb/B : 0.7 Vp-p (75 Ω) Pr/Cr/R : 0.7 Vp-p (75 Ω)
AUDIO IN (L/R)	RCA pin jack x 1 set	0.5 Vrms
HDMI IN	HDMI TYPE A x 1	
DVI-D IN	DVI-D 24Pin x 1	Compliance with DVI Revision 1.0
	Content Protection	Compatible with HDCP 1.1
AUDIO IN (L/R)	Stereo mini jack (M3) x 1	0.5 Vrms (Common terminal with PC IN)
PC IN	Mini D-sub 15 Pin	Y or G with sync 1.0 Vp-p (75 Ω) Y or G without sync 0.7 Vp-p (75 Ω) Pb/Cb/B : 0.7 Vp-p (75 Ω) Pr/Cr/R : 0.7 Vp-p (75 Ω) HD/VD : 1.0 - 5.0 Vp-p (high impedance)
AUDIO IN (L/R)	Stereo mini jack (M3) x 1	0.5 Vrms (Common terminal with DVI-D IN)
Function Slot:SLOT 2.0	Yes	

CONTROL TERMINAL

LAN	RJ45 10 BASE-T/100 BASE-TX, Compatible with PJ Link
SERIAL	D-sub 9Pin x 1 (EXTERNAL CONTROL TERMINAL), RS-232C compatible
3D shutter out	M3 jack x 1 (for 3D IR Transmitter)
DC 8V out for 3D IR Transmitter	Center Plus for EIAJ 4 mm Plug

ELECTRICAL

Power Requirements	110-127 V AC, 50 Hz/60 Hz
Power Consumption	420 W
On Mode Average Power Consumption*2	approx. 205W (T.B.D)
Power off condition	0.2 W
Stand-by condition	Save ON 0.4 W, Save OFF 0.7 W

*2: Based on IEC 62087 Ed.2 measurement method.

SOUND

Audio Output	6Ω, 16 W [8 W + 8 W] (10 % THD)
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MECHANICAL

Dimensions (W x H x D)	47.7" x 28.5" x 3.5" (1,210 × 724 × 89 mm)
Carton Dimensions (W x H x D)	54.5" x 32.9" x 11.2" (1,385 × 836 × 284 mm)
Weight	approx. 75.0 lbs. (34.0 kg)
Gross weight	approx. 94.8 lbs. (43.0 kg)
Cabinet Color	Black

ENVIRONMENTAL

Operating environment	Temperature : 32 °F to 104 °F (0 °C to 40 °C)
	Humidity : 20 % to 80 % (Non condensation)
	Altitude : 0 to 9,100 feet (0 to 2,800 m)
Storage environment	Temperature : -4 °F to 140 °F (-20 °C to 60 °C)
	Humidity : 20 % to 90 % (Non condensation)
	Altitude : 0 to 10,800 feet (0 to 3,300 m)

REMOTE CONTROL TRANSMITTER

Power Requirements	DC 3 V (2 x AA Size batteries)
Operation distance	approx. 23 ft (7 m) in front of plasma display
Weight	approx. 5.7 oz (160 g) including batteries

INCLUDED ACCESSORIES

- AC power cord - Operating instruction book - Clamper x 1 - Ferrite core x 2 - Remote control transmitter - Batteries

MAIN FEATURE

Digital Zoom	Yes
ID Select	Yes
Power-On Delay	Yes
HV Delay	H DELAY/V DELAY/HV DELAY/OFF
Over Scan	Yes
Under Scan	Yes
Gamma	1.0/2.0/2.2/2.35/2.6 (T.B.D)
Studio Gain	Yes
Color Temperature	NORMAL-WARM-WARM2-WARM3-COOL-STUDIO
Color space adjustment (Color Gamut)	DIGITAL CINEMA COLOR/CUSTOM/NATIVE/BT.709/EBU/SMPTE-C
External Scaler	Yes
Picture profile (Memory save)	Yes
Waveform Monitor	ON (Full scan, Single line scan)/OFF
Marker Settings	Aspect marker/Safe area marker/Center marker/Crossharch marker
RGB/MONO settings	BLUE ONLY/RGB/MONO
Screen Saver	Negative image, Scrolling bar only, White screen, Overlay scrolling bar
NANO DRIFT Saver	Yes (LOW/MID/HIGH)
3D Input Format	AUTO/SIDE BY SIDE/TOP AND BOTTOM/NATIVE/SIMULTANEOUS
3D Viewing Mode	3D/COMPARISON(SIDE BY SIDE/TOP AND BOTTOM)/LEFT/RIGHT
Function botton (Remote controller)	1 ~ 8
Network funaction	Yes
Test Patterns	Color bars/Red/Green/Black/1% window/Frame/Blue

OPTIONAL ACCESSORIES

Pedestal	TY-ST20-K
Wall-hanging bracket	TY-WK42PV20
Wall-hanging bracket (angled)	TY-WK42PR20
Ceiling-hanging bracket	TY-CE42PS20
Mobile stand	TY-ST58PF20
Speakers	TY-SP50P8W-K
3D IR Transmitter	TY-3D30TRW
3D Eyewear	TY-EW3D3LU TY-EW3D3MU TY-EW3D3SU
Dual HD-SDI Terminal Board with 3D signal	TY-FB30DHD3D
Dual DVI Terminal Board with 3D signal	TY-FB30DD3D
BNC Dual Video Terminal Board	TY-FB9BD
DVI-D Terminal Board	TY-FB11DD
Dual HDMI Terminal Board	TY-FB10HMD
HD-SDI Terminal Board	TY-FB9HD
HD-SDI with Audio Terminal Board	TY-FB10HD
Dual link HD-SDI Terminal Board	TY-FB11DHD
AV Terminal Box	TY-TB10AV

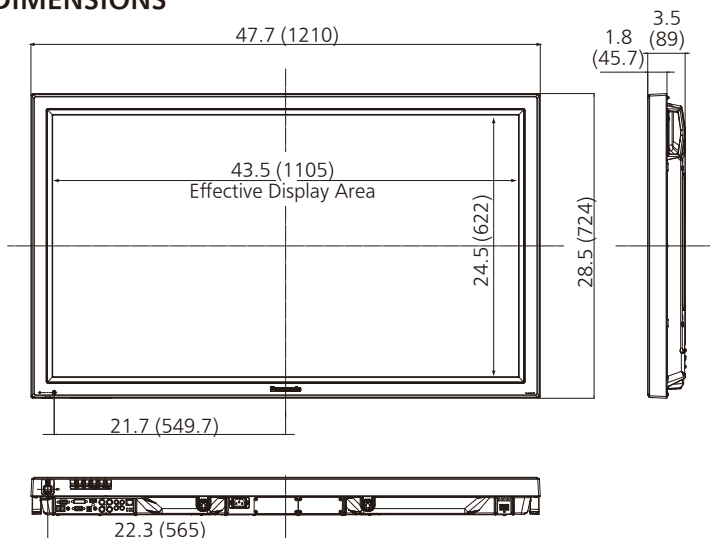
STANDARD (CERTIFICATIONS)

SAFETY REGULATIONS	UL60065, CAN/CSA-22.2 No 60065:03
RADIATION REGULATIONS	FCC Part 15 Class-B, ICES-003
Energy star 5.1	Yes

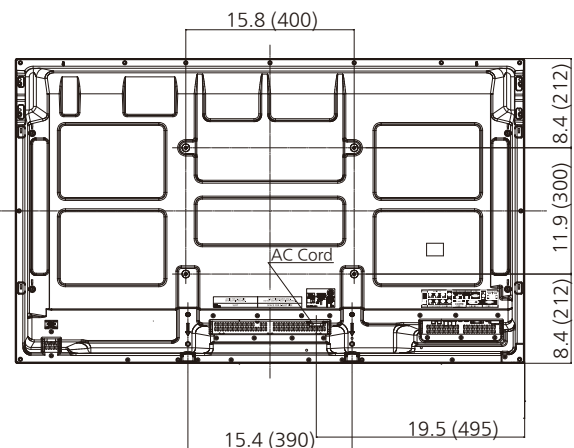
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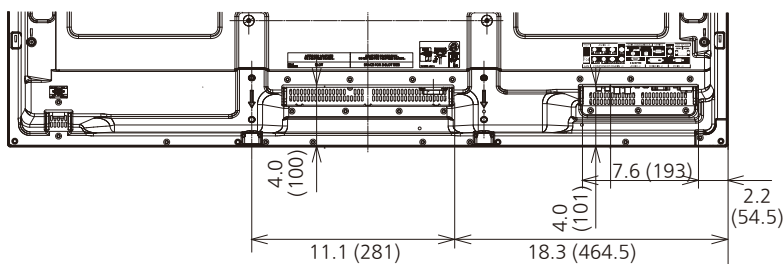
DIMENSIONS



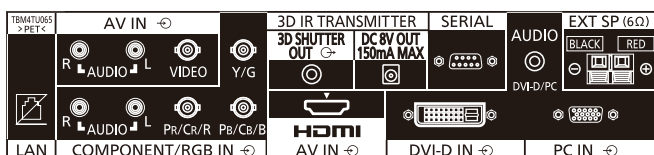
Cautions: This drawing is not a scale
Units : inches (mm)



TERMINAL DIMENSIONS



CONNECTION TERMINAL



● Applicable Input Signals

* Mark: Applicable input signal

	Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)	COMPONENT / RGB IN / PC IN (Dot clock (MHz))	DVI-D IN (Dot clock (MHz))	HDMI
1	525 (480) / 60i	15.73	59.94	* (13.5)	* (27.0)	*
2	525 (480) / 60p	31.47	59.94	* (27.0) *5	* (27.0)	*
3	625 (575) / 50i	15.63	50.00	* (13.5)		
4	625 (576) / 50i	15.63	50.00		* (27.0)	*
5	625 (575) / 50p	31.25	50.00	* (27.0)		
6	625 (576) / 50p	31.25	50.00		* (27.0)	*
7	750 (720) / 60p	45.00	60.00	* (74.25)	* (74.25)	*
8	750 (720) / 50p	37.50	50.00	* (74.25)	* (74.25)	*
9	1,125 (1,080) / 60p	67.50	60.00	* (148.5) *1	* (148.5)	*
10	1,125 (1,080) / 60i	33.75	60.00	* (74.25) *1	* (74.25)	*
11	1,125 (1,080) / 50p	56.26	50.00	* (148.5) *1	* (148.5)	*
12	1,125 (1,080) / 50i	28.13	50.00	* (74.25) *1	* (74.25)	*
13	1,125 (1,080) / 24sF	27.00	48.00	* (74.25) *2		
14	1,125 (1,080) / 30p	33.75	30.00	* (74.25) *1	* (74.25)	
15	1,125 (1,080) / 25p	28.13	25.00	* (74.25) *1	* (74.25)	
16	1,125 (1,080) / 24p	27.00	24.00	* (74.25) *1	* (74.25)	*
17	1,250 (1,080) / 50i	31.25	50.00	* (74.25) *3		
18	2,048 × 1,080 / 24sF *7	27.00	48.00			
19	2,048 × 1,080 / 24p *7	27.00	24.00			
20	640 × 400 @70 Hz	31.46	70.07	* (25.17)		
21	640 × 480 @60 Hz	31.47	59.94	* (25.18) *6	* (25.18)	*
22	640 × 480 @72 Hz	37.86	72.81	* (31.5)		
23	640 × 480 @75 Hz	37.50	75.00	* (31.5)		
24	640 × 480 @85 Hz	43.27	85.01	* (36.0)		
25	800 × 600 @56 Hz	35.16	56.25	* (36.0)		
26	800 × 600 @60 Hz	37.88	60.32	* (40.0)	* (40.0)	*
27	800 × 600 @72 Hz	48.08	72.19	* (50.0)		
28	800 × 600 @75 Hz	46.88	75.00	* (49.5)		
29	800 × 600 @85 Hz	53.67	85.06	* (56.25)		
30	852 × 480 @60 Hz	31.47	59.94	* (33.54) *6	* (34.24)	*
31	1,024 × 768 @50 Hz	39.55	50.00		* (51.89)	*
32	1,024 × 768 @60 Hz	48.36	60.00	* (65.0)	* (65.0)	*
33	1,024 × 768 @70 Hz	56.48	70.07	* (75.0)		
34	1,024 × 768 @75 Hz	60.02	75.03	* (78.75)		
35	1,024 × 768 @85 Hz	68.68	85.00	* (94.5)		
36	1,066 × 600 @60 Hz	37.64	59.94	* (53.0)	* (53.0)	*
37	1,152 × 864 @60 Hz	53.70	60.00		* (81.62)	*
38	1,152 × 864 @75 Hz	67.50	75.00	* (108.0)		
39	1,280 × 768 @60 Hz	47.70	60.00	* (80.14)		
40	1,280 × 960 @60 Hz	60.00	60.00	* (108.0)		
41	1,280 × 960 @85 Hz	85.94	85.00	* (148.5)		
42	1,280 × 1,024 @60 Hz	63.98	60.02	* (108.0)	* (108.0)	*
43	1,280 × 1,024 @75 Hz	79.98	75.03	* (135.0)		
44	1,280 × 1,024 @85 Hz	91.15	85.02	* (157.5)		
45	1,366 × 768 @50 Hz	39.55	50.00		* (69.92)	*
46	1,366 × 768 @60 Hz	48.36	60.00	* (86.71)	* (87.44)	*
47	1,400 × 1,050 @60 Hz	65.22	60.00		* (122.61)	*
48	1,600 × 1,200 @60 Hz	75.00	60.00	* (162.0)	* (162.0)	*
49	1,600 × 1,200 @65 Hz	81.25	65.00	* (175.5)		
50	1,920 × 1,080 @60 Hz	67.50	60.00	* (148.5) *4	* (148.5)	*
51	1,920 × 1,200 @60 Hz	74.04	59.95		* (154.0)	*
52	Macintosh13" (640 × 480)	35.00	66.67	* (30.24)		
53	Macintosh16" (832 × 624)	49.72	74.54	* (57.28)		
54	Macintosh21" (1,152 × 870)	68.68	75.06	* (100.0)		

* 1: Based on SMPTE 274M standard.

* 2: Based on SMPTE RP211 standard.

* 3: Based on SMPTE 295M standard.

* 4: The input signal is recognized as 1,125 (1,080) / 60p.

* 5: When selected the RGB format and 525p signal input to the PC IN terminal, it is recognized as VGA 60Hz signal.

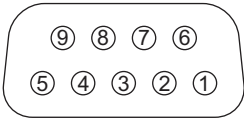
* 6: When inputted VGA 60Hz format signal from the other than PC IN terminal, it is recognized as 525p signal.

* 7: Based on SMPTE 292M and 372M standards. These signals can be received when the Dual Link HD-SDI Terminal Board (TY-FB11DHD) or Dual HD-SDI Terminal Board for 3D (TY-FB30DHD3D) is installed.

Note: Signals without above specification may not be displayed properly.

● Pin assignments and signal names

■Serial Terminals Connection : D-sub 9-Pin



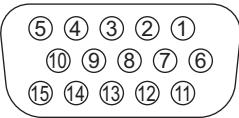
Pin No.	Details
②	R X D
③	T X D
⑤	GND
④・⑥	Non use
⑦ ⑧	⌈ ⌋ (Shorted in this set)
①・⑨	
	NC

These signal names are those of computer specifications.

Communication parameters

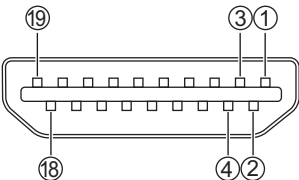
Signal level	RS-232C compliant
Synchronization method	Asynchronous
Baud rate	9600 bps
Parity	None
Character length	8 bits
Stop bit	1 bit
Flow control	-

■PC Input Terminals Connection : Mini D-sub 15-Pin



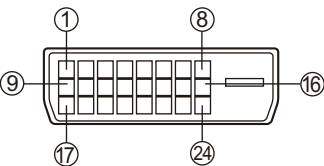
Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R (P _R /C _R)	⑥	GND (Ground)	⑪	NC (not connected)
②	G (Y)	⑦	GND (Ground)	⑫	SDA
③	B (P _B /C _B)	⑧	GND (Ground)	⑬	HD/SYNC
④	NC (not connected)	⑨	+5 V DC	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	SCL

■HDMI connection



Pin No.	Signal Name	Pin No.	Signal Name
①	T.M.D.S Data2+	⑪	T.M.D.S Clock Shield
②	T.M.D.S Data2 Shield	⑫	T.M.D.S Clock-
③	T.M.D.S Data2-	⑬	CEC
④	T.M.D.S Data1+	⑭	Reserved (N.C. on device)
⑤	T.M.D.S Data1 Shield		
⑥	T.M.D.S Data1-	⑮	SCL
⑦	T.M.D.S Data0+	⑯	SDA
⑧	T.M.D.S Data0 Shield	⑰	DDC/CEC Ground
⑨	T.M.D.S Data0-	⑱	+5V Power
⑩	T.M.D.S Clock+		Hot Plug Detect

■DVI-D IN connection



Pin No.	Signal Name	Pin No.	Signal Name
①	T.M.D.S. data 2-	⑬	_____
②	T.M.D.S. data 2+	⑭	+5 V DC
③	T.M.D.S. data 2 shield	⑮	Ground
④	_____	⑯	Hot plug detect
⑤	_____	⑰	T.M.D.S. data 0-
⑥	DDC clock	⑱	T.M.D.S. data 0+
⑦	DDC data	⑲	T.M.D.S. data 0 shield
⑧	_____	⑳	_____
⑨	T.M.D.S. data 1-	㉑	_____
⑩	T.M.D.S. data 1+	㉒	T.M.D.S. clock shield
⑪	T.M.D.S. data 1 shield	㉓	T.M.D.S. clock+
⑫	_____	㉔	T.M.D.S. clock-